

AMENDMENTS TO THE CLAIMS:

Amend the claims as follows:

1. (Currently Amended) An antibody conjugate, comprising a humanized antibody or an antibody fragment thereof which is conjugated with therapeutic protein or a low molecular weight agent, wherein the humanized antibody or the antibody fragment thereof specifically binds to ganglioside GD3 and comprises:

CDR1, CDR2 and CDR3 of H chain V region having the amino acid sequences represented by SEQ ID NOs:3, 4 and 5, respectively, or an H chain V region having the amino acid sequence represented by SEQ ID NO:9; and

CDR1, CDR2 and CDR3 of L chain V region having the amino acid sequences represented by SEQ ID NOs:6, 7 and 8, respectively, or an L chain V region having the amino acid sequence represented by SEQ ID NO:54; and

~~an H chain V region having the amino acid sequence represented by SEQ ID NO:9, or~~

~~an L chain V region having the amino acid sequence represented by SEQ ID NO:54.~~

Claims 2-14. (Canceled)

15. (Previously Presented) The antibody conjugate according to claim 1, wherein the humanized antibody comprises:

framework regions (FRs) of an H chain V region and an L chain V region of a human antibody.

16. (Previously Presented) The antibody conjugate according to claim 1, wherein the humanized antibody comprises:

FRs of an H chain V region and an L chain V region of a human antibody; and
an H chain C region and an L chain C region of a human antibody.

Claims 17-21. (Canceled)

22. (Currently Amended) The antibody conjugate according to claim 1, wherein the humanized antibody comprises:

the H chain V region having the amino acid sequence ~~sequences~~ represented by SEQ ID NO:9; and

the L chain V region having the amino acid sequence represented by SEQ ID NO:54.

23. (Previously Presented) The antibody conjugate according to claim 1, wherein the humanized antibody is an antibody produced by a transformant KM8871 (FERM BP-6790).

24. (Previously Presented) The antibody conjugate according to claim 1, wherein the antibody fragment is an antibody fragment selected from Fab, Fab', F(ab')₂, a single chain antibody (scFv), and a disulfide stabilized V region fragment (dsFv).

Claims 25-31. (Canceled)

32. (Currently Amended) The ~~derivative of the~~ antibody conjugate according to claim 1, wherein the antibody fragment comprises:

the H chain V region having the amino acid sequence represented by SEQ ID NO:9; and

the L chain V region having the amino acid sequence represented by SEQ ID NO:54.

Claims 33-35. (Canceled)

36. (Previously Presented) The antibody conjugate according to claim 1, wherein the therapeutic agent ~~protein~~ is a cytokine.

37. (Previously Presented) The antibody conjugate according to claim 36, wherein the cytokine is human interleukin-2 (hIL-2).

Claims 38-39. (Canceled)

40. (Previously Presented) The antibody conjugate according to claim 37, wherein the antibody conjugate comprises a humanized antibody produced by transformant KM8871 (FERM BP-6790) and hIL-2.

41. (Currently Amended) The antibody conjugate according to claim 37, wherein the antibody conjugated with hIL-2 comprises:

the H chain V region having the amino acid sequence represented by SEQ ID NO:53; and

the L chain V region having the amino acid sequence represented by SEQ ID NO:54;

wherein the H chain V region conjugated with hIL-2 has the amino acid sequence represented by SEQ ID NO:53.

Claims 42-47. (Canceled)

48. (Previously Presented) A humanized antibody or an antibody fragment thereof which specifically binds to ganglioside GD3 and comprises:

an H chain V region having the amino acid sequence represented by SEQ ID NO:9; and

an L chain V region having the amino acid sequence in which at least one or more amino acid residue selected from 41st position Gly, 44th position Pro, 83rd position Phe and 87th position Tyr represented by SEQ ID NO:10 is replaced with Asp, Val, Ile and Phe, respectively.

Claim 49. (Canceled)

50. (Previously Presented) The humanized antibody or the antibody fragment thereof according to claim 48 or 63, wherein the humanized antibody comprises:

FRs of an H chain V region and an L chain V region of a human antibody.

51. (Previously Presented) The humanized antibody or the antibody fragment thereof according to claim 48 or 63, wherein the humanized antibody comprises:

FRs of an H chain V region and L chain v region of a human antibody; and

an H chain C region and an L chain C region of a human antibody.

Claims 52-56. (Canceled)

57. (Previously Presented) The humanized antibody or the antibody fragment thereof according to claim 48 or 63, wherein

the H chain V region of the antibody comprises the amino acid sequence represented by SEQ ID NO:9; and

the L chain V region of the antibody comprises the amino acid sequence represented by SEQ ID NO:54.

58. (Previously Presented) The humanized antibody KM8871 or the antibody fragment thereof according to claim 48 or 63, wherein the humanized antibody is an antibody produced by a transformant KM8871 (FERM BP-6790).

Claims 59-61. (Canceled)

62. (Previously Presented) A transformant KM8871 (FERM BP-6790) which produces the humanized antibody according to claim 48 or 63.

63. (Previously Presented) A humanized antibody or an antibody fragment thereof which specifically binds to ganglioside GD3 and comprises:

CDR1, CDR2 and CDR3 of H chain V region having the amino acid sequences represented by SEQ ID NOs:3, 4 and 5, respectively, or an H chain V region having the amino acid sequence represented by SEQ ID NO:9; and

CDR1, CDR2 and CDR3 of L chain V region having the amino acid sequences represented by SEQ ID NOs:6, 7 and 8, respectively, or an L chain V region having the amino acid sequence represented by SEQ ID NO:54; and

~~an H chain V region having the amino acid sequence represented by SEQ ID NO:9, or~~

~~an L chain V region having the amino acid sequence represented by SEQ ID NO:54.~~

64. (Previously Presented) The humanized antibody or the antibody fragment thereof according to claim 48 or 63, wherein the antibody fragment is an antibody fragment selected from Fab, Fab', F(ab')₂, a single chain antibody (scFv), and a disulfide stabilized V region fragment (dsFv).

65. (Currently Amended) The ~~[[]]~~humanized antibody or the antibody fragment thereof according to claim 48 or 63, wherein the antibody fragment comprises:

the H chain V region having the amino acid sequence represented by SEQ ID NO:9; and

the L chain V region having the amino acid sequence represented by SEQ ID NO:54.

66. (new) The antibody conjugate of claim 1 wherein the therapeutic agent is selected from the group consisting of a nitrogen mustard, cyclophosphamide, 5-fluorouracil, methotrexate, daunomycin, bleomycin, mitomycin C, daunorubicin, doxorubicin, vincristine, vinblastine, vindesine, tamoxifen, dexamethasone, hydrocortisone, prednisone, aspirin, indometacin, aurothiomalate, penicillamine, cyclophosphamide, azathioprine, chlorpheniramine maleate, and clemastine.

67. (new) The antibody conjugate of claim 1 wherein the therapeutic agent is selected from the group consisting of a cytokine which activates immunocompetent cells and a toxin.

68. (new) The antibody conjugate of claim 1 wherein the therapeutic agent is selected from the group consisting of hIL-2, hGM-CSF, human macrophage colony-stimulating factor, human interleukin 12, ricin, and diphtheria toxin.

69. (new) The antibody conjugate of claim 40, wherein the antibody conjugate is an antibody conjugate produced by a transformant KM8871hIL2 (FERM BP-6791).